

Notice of Allowability

Application No.

10/712,530

Examiner

Angela J. Martin

Applicant(s)

KOMATSU ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/8/06.
2. ☒ The allowed claim(s) is/are 10-13,34-37 and 62.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

The Applicant claims a nonaqueous secondary electrolytic battery comprising an electricity-generating element comprising a positive electrode plate and a negative electrode plate with a separating material, and a battery case accommodating the electricity-generating element wherein the battery case has a portion which includes two resin sheets each comprising a heat-fused layer, and a welded portion in which the resin sheets are welded together, being superimposed over each other so that each of the heat fused layers are integrated together; wherein the relationship $X < Y$ is met, where X is a total thickness of the heat fused layers welded in the welded portion at an outer end, and Y is a total thickness of the heat fused layers welded in the welded portion at an inner end.

Applicant claims a nonaqueous secondary electrolytic battery comprising an electricity-generating element comprising a positive electrode plate and a negative electrode plate with a separating material, a positive lead terminal and a negative lead terminal; and a battery case, made of a resin sheet having welded portions in which overlapped portions of the resin sheet are welded together, accommodating the electricity-generating element, the terminals extending through one of the welded portions; wherein the positive lead terminal is bent at a positive bent portion outside the battery case at a radius of from 0.5 mm to 4 mm; and the negative lead terminal is bent at a negative bent portion outside the battery case at a radius of from 0.5 mm to 4 mm.

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In the prior art of record, Sonozaki et al., U.S. Pat. No. 6,106,973, teach a nonaqueous secondary electrolytic battery comprising an electricity-generating element having a positive electrode plate and a negative electrode plate opposed to each other with a separating material interposed and lead terminals electrically connected to the electrode plates; and a battery case made of a resin sheet having welded portions in which overlapped portions of the resin sheet are sealed together, the lead terminals extending through one of the welded portions. Hatta et al., U.S. Pat. No. 6,797,430 B1, teach a nonaqueous secondary electrolytic battery comprising a battery case made of a resin sheet having welded portions in which overlapped portions of the resin sheet are sealed together, the lead terminals extending through one of the welded portions. Hatazawa et al., U.S. Pat. No. 6,428,934 B1, teach a nonaqueous secondary electrolytic battery comprising an electricity-generating element having a battery case made of a resin sheet having welded portions in which overlapped portions of the resin sheet are sealed together, the lead terminals extending through one of the welded portions, wherein the terminals are each bent. It teaches a bent portion of the terminals is covered by a resin layer.

However, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a welded portion in which the resin sheets are welded together, being superimposed over each other so that each of the heat fused layers are integrated together; wherein the relationship $X < Y$ is met, where X is a total thickness of the heat fused layers welded in the welded portion at an outer end, and Y is a total thickness of the heat fused layers welded in the welded portion at an inner end. In

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addition, the prior art of record does not disclose the positive lead terminal is bent at a positive bent portion outside the battery case at a radius of from 0.5 mm to 4 mm; and the negative lead terminal is bent at a negative bent portion outside the battery case at a radius of from 0.5 mm to 4 mm.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM



PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER